CLAIMS

1. A method for translating voltage levels of digital signals, said method comprising:

providing a first digital signal operating between a first voltage and a second voltage, the first voltage corresponding to a logic 0 and the second voltage corresponding to a logic 1;

providing the first digital signal as an input to a capacitive element, an output of the capacitive element being electrically connected in parallel to a first branch and a second branch, the first branch being electrically connected to a third voltage, the second branch being electrically connected to a fourth voltage; and

causing the first and second voltages to interact with the first branch and the second branch such that a second digital signal is produced, the second digital signal operating between the third voltage and the fourth voltage.

2. The method of claim 1, wherein the first voltage corresponds to ground, and the second voltage is approximately 5 V.

3. The method of claim 1, wherein the third voltage is approximately –695 V, and the fourth voltage is approximately –700 V.

4. The method of claim 1, wherein the third voltage and the fourth voltage exhibit an average value, the absolute value of which is at least an order of magnitude different than an average value of the first voltage and the second voltage.

5. A method for translating voltage levels of digital signals, said method comprising:

providing a circuit board;

providing, on the circuit board, a first digital signal operating between a first voltage and a second voltage, the first voltage corresponding to a logic 0 and the second voltage corresponding to a logic 1; and

providing, on the circuit board, a second digital signal operating between a third voltage and a fourth voltage, the third voltage and the fourth voltage exhibiting an average value, wherein the average value has an absolute value that is at least an order of magnitude different than an average value of the first voltage and the second voltage, the first voltage and the second voltage being used to produce the second digital signal.

6. The method of claim 5, further comprising:

providing, on the circuit board, a capacitor electrically connected between the first digital signal and the second digital signal, the capacitor being selected to prevent voltage levels associated with the second digital signal from altering the first digital signal.

7. The method of claim 6, further comprising:

providing a first branch and a second branch electrically connected in parallel with an output of the capacitor, the first branch including a first diode and a first RC circuit electrically connected in parallel between a source of the third voltage and the capacitor, the second branch including a second diode and a second RC circuit electrically connected in parallel between a source of the fourth voltage and the capacitor.

8. The method of claim 5, wherein the first voltage corresponds to ground, and the second voltage is approximately 5 V.

9. The method of claim 5, wherein the third voltage is approximately –695 V, and the fourth voltage is approximately –700 V.

10. The method of claim 5, wherein a difference between the first voltage and the second voltage is approximately equal to a difference between the third voltage and the fourth voltage.

11. A system for translating voltage levels of digital signals comprising:

a circuit board operative to use a first digital signal and a second digital signal, the first digital signal operating between a first voltage and a second voltage, the first voltage corresponding to a logic 0 and the second voltage corresponding to a logic 1, the second digital signal operating between a third voltage and a fourth voltage, the third voltage and the fourth voltage exhibiting an average value, having an absolute value that is at least an order of magnitude different than an average value of the first voltage and the second voltage,

the circuit board being further operative to use the first digital signal to produce the second digital signal.

12. The system of claim 11, wherein the circuit board further comprises:

a capacitor located to receive the first digital signal, the capacitor being operative to prevent the third voltage and the fourth voltage from altering the first digital signal.

13. The system of claim 11, wherein the circuit board further comprises:

a first branch and a second branch electrically connected in parallel with an output of the capacitor, the first branch including a first diode and a first RC circuit electrically connected in parallel between a source of the third voltage and the capacitor, the second branch including a second diode and a second RC circuit electrically connected in parallel between a source of the fourth voltage and the capacitor.

14. The system of claim 13, wherein the first RC circuit is electrically equivalent to the second RC circuit.

15. The system of claim 13, further comprising:

means for latching the second digital signal.

16. The system of claim 13, wherein the circuit board further comprises:

a first NORgate having a first input, a second input and an output, the first input of the first NORgate being electrically connected to the first branch; and

a second NORgate having a first input, a second input and an output, the first input of the second NORgate being electrically connected to the second branch, the output of the second NORgate being electrically connected to the second input of the first NORgate, the output of the first NORgate being electrically connected to the second input of the second NORgate such that the first NORgate and the second NORgate function as a digital signal latch.

17. The system of claim 16, wherein the circuit board further comprises:

an inverting driver electrically connected in series between the capacitor and the first input of the first NORgate; and

a non-inverting driver electrically connected in series between the capacitor and the first input of the second NORgate.

18. The system of claim 11, wherein the first voltage corresponds to ground, and the second voltage is approximately 5 V.

19. The system of claim 11, wherein the third voltage is approximately –695 V, and the fourth voltage is approximately –700 V.

20. The system of claim 11, wherein a difference between the first voltage and the second voltage is approximately equal to a difference between the third voltage and the fourth voltage.